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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,793	12/08/2005	Akihisa Kobayashi	59559.00024	7512

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EXAMINER

BODAWALA, DIMPLE N

ART UNIT	PAPER NUMBER
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1722

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07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,793	Applicant(s) KOBAYASHI ET AL.	
	Examiner Dimple N. Bodawala	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/8/2005, 1/30/2007, 2/15/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-5, drawn to a molding machine.

Group II, claim(s) 6-10, drawn to a molding method.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: claim 6 is either obvious or anticipated by US 6,120,711. Accordingly, the special technical feature linking the inventions, the charge pressure setting processing means, does not provide a contribution over the prior art, and no single general inventive concept exists.

During a telephone conversation with Douglas Goldhaush on June 25, 2007 a provisional election was made *without* traverse to prosecute the invention of Group I, claims 1-5, drawn to a molding machine. Affirmation of

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this election must be made by applicant in replying to this Office action.

Claims 6-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The disclosure is objected to because of the following informalities:

Paragraph 9 is confused because paragraph 9 discloses an accumulator, which is disposed along an oil passage for supplying oil to the accumulator (See lines 3-4), while paragraph 10 discloses an accumulator, which is disposed along an oil passage for supplying oil to the actuator (See lines 3-4).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the basis" in line 2, which lacks sufficient antecedent basis for this limitation in the claim. Claim 1 is unclear and confused by using phrase "the basis", wherein the phrase also involved in different claims with different subject matter, such as "the basis of the charge pressure and the drive pressure" (claim 1), "the basis of the minimum sensed charge pressure and the maximum sensed charge pressure" (claim 2), and "the basis of the sensed charge pressure and the upper and the lower limit" (claim 5). Therefore, appropriate correction is required.

Claim 2 recites the limitation "the minimum sensed charge pressure" in line 3, and "the maximum sensed charge pressure" in line 4, which lack sufficient antecedent basis for these limitations in the claim. Claim 2 depends on claim 1, wherein claim 1 does not teach or suggest anything related to "the minimum sensed charge pressure", and "the maximum sensed charge

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pressure”, which make scope of the subject matter of claim 2 indeterminate.

Therefore, appropriate correction is required.

Claim 3 recites the limitation “the upper limit of the charge pressure” in lines 2- 3, and “the pressure difference” in lines 3-4, which lack sufficient antecedent basis for these limitations in the claim. Claim 3 depends on claim 2, wherein claim 2 does not teach or suggest anything related to “the upper limit of the charge pressure”, and “the pressure difference”, which make scope of the subject matter of claim 3 indeterminate. Therefore, appropriate correction is required.

Claim 4 recites the limitation “the lower limit of the charge pressure” in lines 2- 3, which lacks sufficient antecedent basis for these limitations in the claim. Claim 4 depends on claim 3, wherein claim 3 does not teach or suggest anything related to “the lower limit of the charge pressure”, which make scope of the subject matter of claim 4 indeterminate. Therefore, appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by JP (2003-145600) (the prior art cited in IDS, filed on December 08, 2005).

JP ('600) discloses an injection-molding machine, which comprises an actuator (10) driven by oil supplied thereto (See paragraph #s 7, 14, and figure 1); an accumulator (28) disposed along an oil passage (L-4 through L-11) for supplying oil to the actuator (10) (See paragraph #s 3, 4, 14, and figure 1); an actuator pressure sensor (24) as a drive pressure sensing section for sensing (detecting) the drive pressure for driving actuator (10) (See paragraph # 8, figure 1); an accumulator pressure sensor (32) as a charge pressure sensing section for sensing (detecting) the charge pressure of the accumulator (28) (See paragraph # 21, and figure 1); an accumulator setting processing means as a charge pressure sensing setting processing means which makes the set point low when the accumulator (28) is higher enough than the actuator (10), and thus inherently teaches to set the charge pressure on the basis of the charge pressure which is sensed, and the drive pressure which is sensed as defined in claim 1 (See paragraph # 7).

JP ('600) furthermore teaches that an accumulator setting processing means as a charge pressure sensing setting processing means which makes

the set point low when the accumulator (28) is higher enough than the actuator (10), and the actuator pressure is made into a peak pressure, which is a maximum injection cylinder (drive) pressure, thus inherently teaches to set the charge pressure on the basis of the minimum sensed charge pressure of the sensed charge pressure (an accumulator), and the maximum sensed drive pressure of the sensed drive pressure (an actuator) as defined in claim 2 (See paragraph #s 7, 32).

JP ('600) furthermore teaches that the charge pressure setting processing means sets the upper limit ($\alpha 1$) of the charge pressure on the basis of the pressure difference the minimum sensed charge pressure (P_{n1}) and the maximum pressure (Peak pressure) of the sensed drive pressure (P_p), and sets the lower limit ($\beta 1 - \alpha 1$) on the basis of the upper limit ($\alpha 1$) (See paragraph #s 36 and 37).

JP ('600) furthermore discloses an adjusting device as a pressure adjusting processing means adjusts the charge pressure on the basis of the sensed charge pressure (24, and 32) and set point such as the upper and lower limit (See paragraph # 46).

JP ('600) discloses all the claimed structural limitations, and, thus, the claims are anticipated.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Amano (U S Patent No. 7,067,078 B2).

Amano ('078) discloses an electric injection-molding machine (See col.2 line 59) as a molding machine, which comprises an actuator (24,27) driven by oil supplied thereto (See abstract); an accumulator (96) disposed along an oil passage for supplying oil to the actuator (See abstract); a pressure sensor (61) for an actuator (24) as a drive pressure sensing section for sensing the drive pressure for driving the actuator (24) (See col.4 lines 35-40); a pressure sensor (98) for an accumulator (96) as a charge pressure sensing section for sensing the charge pressure (400) of the accumulator (96) (See col.5 lines 24-28); and an apparatus for setting (See col.6 line 48) as a charge pressure setting processing means which sets the charge pressure (400) on the basis of the charge pressure which is sensed by a pressure sensor (98) and the drive pressure (300) which is sensed by the pressure sensor (61) (See col.6 lines 63 through col.7 lines 12; col.10 lines 50-56).

Amano ('078) further teaches to reduce the accumulating pressure range in a case where the detected accumulating pressure is sufficiently higher than the detected actuating pressure (See col.10 lines 7-10), wherein the actuating pressure is a maximum pressure (See col.7 lines 9-10), thus inherently teaches that the apparatus of setting sets the charge pressure on the basis of the minimum sensed charge pressure of the sensed charge pressure and the maximum sensed drive pressure of the sensed drive pressure as defined in claim 2.

Amano ('078) further teaches that the apparatus of setting sets the upper limit ($\alpha 1$) of the charge pressure in the basis of the pressure difference between the minimum sensed charge pressure (P_{n1}) and the maximum sensed drive pressure (P_p) (See col.7 lines 13-15).

Amano ('078) further teaches that the apparatus of setting sets the lower limit of the charge pressure by having comparison of difference ($\alpha 1$) and the difference of hysteresis ($\beta 1 - \alpha 1$) (See col.8 lines 16-56), thus inherently sets the lower limit on the basis of the upper limit as defined in claim 4.

Amano ('078) further discloses an accumulating hydraulic pressure change part as a pressure adjusting processing means teaches that the accumulating pressure (or a charge pressure) sets in a range of designated

values such as the upper limit and the lower limit, which is accumulated (See col.2 lines 11-14), and further teaches to reduce a set value of the accumulating hydraulic pressure in a case where the accumulating pressure is sufficiently higher than the actuator (See col.2 lines 18-23), thus inherently teaches to adjust the charge pressure on the basis of the sensed charge pressure and the sets in a range of designated values such as the upper limit and the lower limit as defined in claim 5.

Amano ('078) discloses all the claimed structural limitations, and, thus, the claims are anticipated.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takizawa (U S Patent No. 6,120,711) discloses an accumulator control method for injection molding apparatus, which comprises an actuator, an accumulator, a drive pressure sensing, and a charge pressure sensing. But it does not teach or suggest a charge pressure setting processing means.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dimple N. Bodawala whose telephone number is (571) 272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNB


JAMES P. MACKEY
PRIMARY EXAMINER
7/7/07